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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/979,564	11/14/2001	Hans Bloecher	3926.033	2814

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EXAMINER

ISSING, GREGORY C

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/979,564

Applicant(s)

BLOECHER, HANS

Examiner

Gregory C. Issing

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/22/04 (RCE).  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 11, 16-18 and 20 is/are rejected.  
7) ☒ Claim(s) 12-15 and 19 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 is not understood. More particularly, the following is not clear “the combined radiation path,” and “one of said main lobes at least partially suppressed.” With respect thereto, the terminology “path” appears misdescriptive (Examiner suggests the language “pattern”) and the second statement appears to be missing “is.” In claim 20, the term “path” is again misdescriptive, see above.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith.

5. Smith teaches the claimed invention as set forth in a previous Office Action, also see Figure 1 and its description.

6. Applicant argues that Smith does not teach a hybrid array. It is not exactly clear what the applicant is arguing. Consequently, this argument is not convincing and is not commensurate in scope with the claim limitations as a hybrid array is not mentioned anywhere and a hybrid junction is not a necessity of any of the claims.

7. Claims are rejected under 35 U.S.C. 102(e) as being anticipated by Anmar et al.

Anmar discloses the claimed invention as set forth in a previous Office Action, also see Figure 2 and its description.

Applicant argues that Anmar et al fail to disclose an antenna array having a “differential input for selecting the individual antennas” and Anmar et al fail to teach a hybrid junction. With respect to the applicant’s argument that Anmar et al do not show a hybrid junction, this is not convincing since the applicant does not argue the claim limitations. Each of claims 11, 17 and 18 merely requires connecting antennas via at least one phase shifter. Thus, the claims broadly encompass a feed that incorporates a single phase shifter among the antenna elements. With respect to the argument that the claim limitation of “a differential input for selecting the individual antennas” it not taught by Anmar et al, first it is noted that this is not a limitation of claims 17 and 18. Furthermore, the beamforming network which includes the switches and controls meets the scope of an antenna array having a “sum input” and a “differential input” wherein the beamforming network can selectively control the switches in accordance with a

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desired output pattern. The control word associated with generating the differential patterns meets the scope of the differential input. Moreover, the switch 9 position also reads on the sum input and differential input dependent upon which position the switch is in wherein when switch S9 is in position 1, a transmit Sum signal is selected and wherein when S9 is in position 2, a Differential input is selected. Thus, the applicant's arguments are not commensurate in scope with the claim limitations and further do not distinguish over the prior art.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over either one of Anmar et al or Smith in view of either Masak et al or Pierrot.

10. Anmar et al and Smith teach the subject matter substantially as claimed as set forth previously. It is well-known for antenna systems to reduce/eliminate undesired sidelobes with the use of an additional antenna generating an anti-phased pattern in the sidelobe region as set forth by either one of Masak et al or Pierrot. Thus, it would have been obvious to one having ordinary skill in the art to reduce/eliminate sidelobes in either Anmar et al or Smith using an additional antenna as set forth by either one of Masak et al or Pierrot

Applicants argue that neither Masak nor Pierrot teach a hybrid junction and therefore do not remedy the deficiency of either of Anmar et al or Smith. Applicant's argument is not commensurate in scope with the claimed subject matter since none of the claims require a hybrid junction. Applicant also asserts that the combination of references is not proper since the

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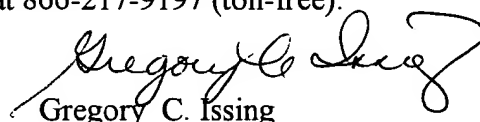
sidelobes of the claims are suppressed while the sidelobes of the prior art are cancelled. This argument is not convincing since if the sidelobes are cancelled, they are suppressed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (703)-306-4156.

The examiner can normally be reached on Mon-Thurs 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703)-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gregory C. Issing  
Primary Examiner  
Art Unit 3662

gci